

REMARKS

***Claim Rejections - 35 U.S.C. §112***

Claims 34-37 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner rejected Claim 34 as dependent on cancelled Claim 24. Claim 34 has been amended to depend from Claim 17. Reconsideration of the rejection of Claims 34-37 is courteously requested.

***Claim Rejections - 35 U.S.C. §103***

Claims 17, 25, 28, 32, 33, and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto (United States Patent No. 5,184,012) in view of Hara et al. (Japanese Patent No. 5-107037). Applicant respectfully traverses the rejection.

When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references and the teachings of the references can be combined only if there is some suggestion or incentive to do so. *In Re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002), citing *In re Fine*. Hence, elements of separate patents cannot be combined when there is no suggestion of such combination in those patents. *Panduit Corp. v. Dennison Manufacturing Co.*, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987). Additionally, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills* 16 U.S.P.Q.2d 1430. Thus, the question of motivation to combine references is material to patentability and cannot be resolved on subjective belief and unknown authority. *In Re Lee, supra*. Moreover,

deficiencies of the cited references cannot be remedied by general conclusions about what is "basic knowledge," or "common sense." *Id.* Indeed, "to imbue one of ordinary skill in the art with knowledge of the invention ... when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*; *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

In the present case, neither of the references cited by the Examiner contain an explicit or implicit teaching, suggestion, or motivation to create the subject invention and none teach, suggest, or motivate one to combine/modify their respective teachings with others to create the subject invention.

Yamamoto does not teach, suggest, or motivate the use of a point-like source. Hara teaches an apparatus that overilluminates an objective, and does not teach, suggest, or motivate an apparatus that does not overilluminate the objective. Neither Yamamoto nor Hara contain any teaching, suggestion, or motivation to eliminate overillumination of a microscope component by a point-like source, as claimed in Claim 17.

Further, Hara teaches away from the present invention. Hara discloses an optical arrangement wherein light from source 2 is expanded and collimated before it is incident on pupil 5. The beam is rectangular before it is incident on the circular pupil 5. Thus, Hara clearly teaches overillumination of pupil 5, leading to the inefficient exclusion of a portion of the incident beam. The present invention eliminates overillumination by the light source to maximize the efficiency of the microscope. The background of the present invention (Page 1,

lines 6-16) discusses the drawbacks of apparatuses like that disclosed by Hara wherein the light source overilluminates an optical component. Thus, one skilled in the art looking to solve the problem of overillumination would not look to Hara for a solution. A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997). Thus, Claim 17 would not have been obvious to one having ordinary skill in the art in light of the cited references.

Claims 25, 32, 33, and 39 are dependent on Claim 17 and include all of the limitations thereof. Consequently, Claims 25, 32, 33, and 39 are respectfully argued to be allowable for the reasons presented above concerning Claim 17.

Claims 22 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Hara et al. and further in view of Takagi et al. (United States Patent No. 5,140,458). The rejection is respectfully traversed for the following reasons.

Claims 22 and 23 both depend, directly or indirectly, from Claim 17. Consequently it is respectfully urged that these claims are allowable for the reasons stated above with respect Claim 17.

Claims 28 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Hara et al. with or without Dabbs et al. (United States Patent No. 5,054,926). The rejection is respectfully traversed for the following reasons.

Claims 28 and 29 both depend directly from Claim 17. Consequently it is respectfully urged that these claims are allowable for the reasons stated above with respect Claim 17.

Claims 34-36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Hara et al. and further in view of Kato (United States Patent No. 4,530,578). The rejection is respectfully traversed for the following reasons.

Claims 34-36 all depend from Claim 17. Consequently it is respectfully urged that these claims are allowable for the reasons stated above with respect Claim 17.

Claim 37 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Hara et al. and further in view of Kato with or without Kain (United States Patent No. 5,672,880). The rejection is respectfully traversed for the following reasons.

Claim 37 depends indirectly from Claim 17. Consequently it is respectfully urged that this claim is allowable for the reasons stated above with respect Claim 17.

Claim 38 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Hara et al. and further in view of Dreessen et al. (United States Patent No. 5,404,238). The rejection is respectfully traversed for the following reasons.

In the present case, none of the references cited by the Examiner contain an explicit or implicit teaching, suggestion, or motivation to create the subject invention and none teach, suggest, or motivate one to combine/modify their respective teachings with others to create the subject invention.

Yamamoto discloses a laser source 1 that is not a point-like source. Dreessen discloses Xenon flashtube 20 as a light source, which is also not a point-like source. The Examiner has cited Hara et al. as disclosing a point-like source. However, there is no teaching, suggestion, or

motivation in any of the cited references to combine their teachings to create the present invention.

As discussed above, Hara teaches away from the present invention. Hara discloses an optical arrangement wherein light from source 2 is expanded and collimated before it is incident on pupil 5. The beam is rectangular before it is incident on the circular pupil 5. Thus, Hara clearly teaches overillumination of pupil 5, leading to the inefficient exclusion of a portion of the incident beam. The present invention eliminates overillumination by the light source to maximize the efficiency of the microscope. The background of the present invention (Page 1, lines 6-16) discusses the drawbacks of apparatuses like that disclosed by Hara wherein the light source overilluminates an optical component. Thus, one skilled in the art looking to solve the problem of overillumination would not look to Hara for a solution. A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997). Neither Yamamoto, nor Hara, nor Dreessen contain any teaching, suggestion, or motivation to eliminate overillumination of a microscope component by a point-like source.

Further, not only is there no teaching, suggestion, or motivation in any of the cited references to create a microscope with a point-like source and zoom optical system arranged to steplessly modify the illumination diameter of the illumination beam, there is no teaching, suggestion, or motivation in any of the cited references to modify a microscope with a point-like source and zoom optical system arranged to steplessly modify the illumination diameter of the illumination beam to include an additional light input coupled into the illumination beam path, as

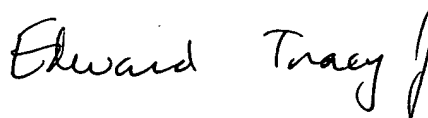
claimed in Claim 38. Thus, Claim 38 would not have been obvious to one having ordinary skill in the art in light of the cited references.

In view of the foregoing, withdrawal of the rejections of Claims 17, 22, 23, 25, 28, 29, and 32-39 under 35 U.S.C. §103 is respectfully sought.

*Conclusion*

It is respectfully urged that the present application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

24. (amended) The optical arrangement according to claim [24] 17, further comprising an optical component in said illumination beam path for altering an intensity distribution of said illumination beam to increase illumination intensity near the edge of said illumination beam.

38. (twice amended) An optical arrangement in an illumination beam path of a confocal laser microscope comprising:

a point-like light source operatively arranged to emit an illumination beam along said illumination beam path;

an illumination optical system arranged in said illumination beam path for modifying an illumination diameter of said illumination beam of said microscope to match an entry pupil of a selected one of said plurality of objectives, wherein said illumination optical system is a zoom optical system which operates steplessly; and,

an additional input whereby a laser light beam from a further light source can be coupled in to said illumination beam path via an additional input and is adaptable to an entry pupil of an objective of said microscope with no adaptation of said actual illumination beam path.